Minutes of Community Workgroup Meeting #9
Tuesday, October 23, 2001
Perkins High School Cafeteria

The meeting began at 6 PM. Present were the following Workgroup members: John Blakeman, Richard Graham, Stan Taylor and Bill Walker. Also present were: Sally Harrington, Tim Polich, Frank Greco, Keith Peecook, and Mike Blotzer from NASA; John Heggie from Montgomery Watson Harza; Kurt Geber from Argonne National Laboratories; Wes Watson from USACE; Dave Forth from SAIC; and Susan Santos, Michael Morgan and Anne Chabot from FOCUS GROUP. In addition, reporter Brad Dicken from the Sandusky Register and five members of the public also attended.

Welcome and Introduction

Tim Polich welcomed the audience to the ninth Workgroup meeting and initiated the round of introductions of Decommissioning Team and Workgroup members. Susan Santos received acceptance of the July meeting minutes and introduced the October agenda. She cited the change of John Heggie, standing in for Mike Schmoldt for the safety presentation.

Safety

John Heggie, Health and Safety Manager for Montgomery Watson Harza, gave the safety presentation. It focused on the confined space work in which the Decommissioning Team is currently engaged. A survey and inventory is being conducted within the Reactor Facility's quadrants and canals. Consistent with NASA's focus on safety, a Job Safety Analysis was performed to look at each task associated with the survey and inventory work in advance of implementation to plan for every potential hazard. From this analysis, confined spaces were identified as a hazard. OSHA defines confined space as an area large enough for a person to get into, but which is not designed for a person to be in; it has limited access and egress, may contain toxic gas, electrical hazards, explosives; or have the potential for engulfment. NASA established safety precautions for working in confined spaces that include conducting air monitoring - before and during operations; having workers wear retractable rescue lines and body harnesses; and familiarizing the Perkins Fire Department with the physical space and activities, as it serves as backup emergency responder.

John showed an array of slides depicting the 25-foot pie-shaped space (filled with water when reactor was in operation) with workers installing scaffolding with sets of stairs (to avoid having to climb ladders). John stressed that each worker had been trained on the safety procedures of working in this environment. Prior to workers entering the confined space, air monitoring is conducted. The air monitor contains four meters that measure oxygen, carbon monoxide, hydrogen sulfide, and explosivity. While work is in progress, the monitor remains within the space at roughly 4-6 feet (worker breathing space). Richard Graham asked if workers were being monitored. John explained that the air monitoring being done is for real-time results of the four gases. John Blakeman asked if there is air exchange in the building. Keith Peecook explained that during pre-decommissioning, the personnel door can remain open for some air exchange because the small crew is performing inspection and survey only (no drilling). Keith said that during decommissioning, NASA will have air filtration/ventilation plans and procedures for assuring safety for the larger work crew while not exhausting anything that shouldn't be emitted from the building.

Pre-Decommissioning

Keith Peecook, NASA's Senior Project Engineer, presented a summary of pre-decommissioning activities that have taken place since the July Workgroup meeting. Keith told Workgroup members that on August 8, the first shipment of waste was sent to the Alaron waste reprocessing facility in Pennsylvania. It consisted of material from the hot cells and Dry Activated Waste - a subcategory of Low Level Radioactive Waste - made up of large volume, low-activity waste such as protective clothing and the plastic that had covered the shipping containers. Keith showed slides depicting personnel readying the load for shipment that included a radiological survey of the truck as it entered (assuring it was clean); the labeling and placarding of the loaded truck; the truck being surveyed again prior to leaving; and the truck leaving Plum Brook Station through the Scheid Road gate.

The truck left Plum Brook Station at roughly 5:30 p.m. and NASA received confirmation from Alaron at approximately 9:00 p.m. that the shipment had arrived safely. John Blakeman asked if the US 250 expansion project had been a problem. Keith noted that NASA had chosen Scheid Road gate to remain south of US 250 construction. John remarked that the truck traveled on "his road" and thanked Keith for a job well done. NASA will again consider progress on the US 250 expansion when coordinating with local authorities on future shipments.

Next, Keith talked about completing the hot dry storage investigation. Hot dry storage is a 25-foot deep vault sealed with thick key-locked concrete (and telescope shaped door closures). It contains larger equipment that is more activated than what was in hot cells. The purpose of this investigation was to get more exact information and confirm historical inventory along with 1985 data.

The radiation levels down on the floor of the vault were 10 rem/hour, with levels close to some storage racks as high as 160 rem/hour. To put this into perspective, Keith noted that a fully certified radiation worker by law can receive 5 rem/year total exposure. Therefore, a clean worker could be down in the vault for about one half-hour and receive his full exposure limit for the year. Standing up at the access hole, levels drop off significantly to about a few hundred mrem/hour. Keith explained the three cardinal rules for reducing worker exposure are time, distance, and shielding.

To investigate the contents of the vault, workers pulled the three access plugs and used 25-30-foot reach rods/poles cameras, mirrors and lights. John Blakeman asked what was the source of the radiation. Keith explained that the radioactive source is not the entire facility, but in discreet items that contain varying activation levels. In contrast to the fixed radiation levels in various pieces of equipment, one can think of loose contamination as radiation dust that can be wiped from a surface with a swab. Loose contamination levels found in hot dry storage were in excess of a million counts per minute – similar to the highest levels found in hot cells equipment but not greater than what NASA expected. Keith explained that the information gathered from this investigation will help formulate more detailed work planning for actual decommissioning. Keith noted that NASA will need to do a lot more characterization of materials but this was a big step forward to confirming what was there and what the levels were.

John Blakeman asked what happens to the concrete plugs once an access hole is opened. Keith described how concrete plugs are lifted and moved on gantry cranes. Cranes proved a challenge to re-activate (and several hundreds of dollars) after 25 years of not being used and being enclosed in a hydrogen sulfide atmosphere that corroded electrical surfaces.

A discussion followed regarding the beryllium plate shown in one of the slides. Keith said it was originally thought that the atmosphere inside the vault would be full of airborne tritium (from the beryllium). However, our air samples revealed no tritium. Once radioactive equipment is removed from the vault, it will be safe to put someone down in to do core borings to sample whether or not the tritium has migrated into the concrete. Richard Graham asked about the condition of the air. Keith explained the concrete key locked doors minimized air exchange, and it remained dry. The source of the hydrogen sulfide atmosphere (mentioned previously) was from groundwater in the sumps in other parts of the building.

Next, Keith talked about NASA's environmental overlay, in response to questions about environmental considerations previously asked by a few Workgroup members. Keith explained that NASA looked at the entire project for all related environmental activities and put them into the master schedule to allow adequate lead-time in applying for environmental permits. For example, a water discharge permit may be necessary for dewatering after demolishing a building. Keith noted that the overlay helps NASA fully integrate environmental considerations into every aspect of the project.

Keith briefly discussed several other accomplishments that have occurred since the last Workgroup meeting. The Decommissioning Team completed its move to on-site trailers. Keith and Tim noted that it's good to have everybody at the job site. Keith reported that they had completed orientation tours and coordination meetings with Perkins Police and Fire Departments so when/if called in as emergency backup, they will be familiar with the project and the facility.

In addition, Keith reported that although the State Historical Preservation Officer has stated that the Reactor Facility is of little or no historical importance, NASA is doing what it can to record the existence of the building (the only test reactor NASA built) and the significance of the work conducted there over the years. NASA commissioned a film crew to produce a documentary (on DVD) that has interactive ability and educational/reference components. The documentary is scheduled for completion next summer (Tim suggested that it would be possible to have a presentation for a future Workgroup meeting). John Blakeman noted that he would like to add some information to the history of the area (pre-NASA). Finally, Keith briefly reviewed some ongoing activities.

Non-Advocate Review (NAR)

NASA uses the NAR process for large, high profile flight missions and is applying it to the Reactor Facility Decommissioning (the first was about 18 months ago, and this current review will take place at the end of October). The reviewers include 22 NASA experts from centers all over the country, a few people from DOE who have done decommissioning, and two people from industry (with expertise in budget, environment, law, etc.).

Decommissioning Plan

The Decommissioning Plan was originally submitted to NRC in December 1999. NASA received questions in December 2000 and responded to NRC questions along with submitting a revised Plan to reflect change in management in March 2001. NRC had more verbal questions a few months ago that NASA answered. NASA is still hopeful for approval in January 2002.

Technical Specifications

NASA has technical specifications (the nuts and bolts on how one does business at reactor), which are appropriate for a shut down reactor. NASA is modifying the tech specs to be appropriate for decommissioning a reactor and will submit them to the NRC in a few weeks. In addition, NASA is in the process of submitting a license amendment to the NRC that will change the license authority (under Glenn Center Director Don Campbell) from the Plum Brook Station Management Office (Bob Kozar) to the Decommissioning Office (Frank Greco).

Activation Analysis

Tim explained under the Code of Federal Regulations, NASA is required to conduct what is known as a Part 61 Characterization of waste from the Reactor Facility. Before waste can be disposed of, NASA must record specifically what is in that material, i.e., the individual isotopes and their levels. No disposal company will accept it unless provided with this information. In addition, this characterization will help NASA determine what kind of cask to use, in order to legally ship the waste. Generally, casks must be ordered about eight months in advance. There are two ways of gathering the information – "hands-off" computer analysis or taking actual samples. NASA knows what the metal is, what its proximity to the core is, and the flux profile. With that data, NASA is doing what it can do now using computer analysis and making conservative assumptions. If needed, NASA can take samples later to validate the computer analysis.

Quadrant and Canal Investigations

Keith showed several pictures to describe the Reactor Facility quadrants and canals. As John Heggie described earlier in the evening, these quadrants are now considered confined spaces. On-going work includes: doing an initial survey to confirm expected radiation levels, constructing scaffolding/stairs, doing inventory of fixed and loose equipment and Part 61 Characterization. This work will last through Thanksgiving.

John Blakeman suggested that the public doesn't understand how the Plum Brook Reactor Facility differs from electricity producing plants such as the Davis Besse and Perry nuclear plants. Keith and Tim explained that the PBRF was never designed to produce electricity. NASA built the Reactor Facility to test material for potential use in space - heat was only a by-product. Plants like Davis Bessie (estimated at 3000 megawatts thermal, 1000 electric), is much larger than the PBRF at 60 megawatts. However, Keith noted that of the several hundred test reactors built in the world, the PBRF is one of the top ten in size.

Community Relations

Sally Harrington gave a Community Relations update. She noted that NASA had done additional advertising for the Community Information Session (CIS) that included ads in five local newspapers; an on-line banner ad in the Sandusky Register; radio ads on three local stations in addition to the public service announcements; notes from Sally to newspaper, radio and television editors; and live interviews on local radio stations and the Cleveland National Public Radio outlet. Workgroup members and others had heard or seen the ads and they agreed that feedback was positive. Sally reported that the first edition of the Decommissioning Newsletter was sent to 1,400 Erie County residents, legislators and area schools and libraries. Within the newsletter is a "Name the Newsletter" contest that will hopefully engage area schools in the project.

Sally also noted that the Decommissioning Information Line (1-800-260-3838) has received about 60 hits/month with a few requests for fact sheets or questions. The line is monitored twice a day and a response is given to inquiries within 24-36 hours. She said the Website has received about 700 hits since June. She noted that the Website is currently not operational (as are none of NASA's external Websites) but it is expected to be operational again within days.

Susan Santos reported that there is a new Transportation fact sheet (she asked that members discard the one received at last Workgroup meeting). The new fact sheet (dated October 2001) reflects a more in-depth description of packaging and transportation requirements as a result of having successfully completed the first shipment.

Susan also described upcoming Community Relations activities that include the next edition of the quarterly newsletter scheduled for January. Each issue will include a profile of a Workgroup member, as well as other timely decommissioning updates and related stories such as a CIS summary. Susan noted that once the Decommissioning Plan is approved there will be several community relations activities including ads in newspapers, updates on the Info line, a newspaper supplement consisting of a special letter to the community, a media briefing, and small reception (possibly coffee and cookies) designed for near neighbors.

Susan encouraged Workgroup members to make themselves known to the community during the CIS and to continue to share their experiences as Workgroup members with others in the community.

The next Workgroup meeting is tentatively scheduled for Tuesday, January 15, 2002. Members requested that agenda items include project updates, inventory information, and any changes to the Decommissioning Plan.

The meeting adjourned at 7:10 p.m.